

07.3—165 Checking fuel pump relay with electronic rpm regulation (breakaway)

Breakaway speeds

Engine	MB-part no.	Breakaway speed 1/min	Speed signal
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Without decel shutoff

Standard version and     starting model year 1981

110.984 110.986 110.987	001 545 07 05 001 545 14 05	6650 ± 50	—
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With decel shutoff

Standard version

110.988	001 545 42 05	6650 ± 50	Mechanical tachometer
110.989 110.990	001 545 43 05		Electronic tachometer

Conventional testers

Voltmeter, revolution counter

Layout fuel pump relay

Model 107

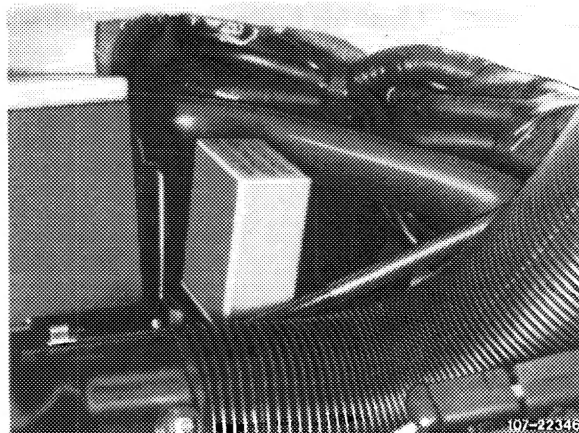
Lefthand steering

At the right inside vehicle behind glove box. For repairs, remove glove box.

Righthand steering

Model 107

At the right inside vehicle above pedals.

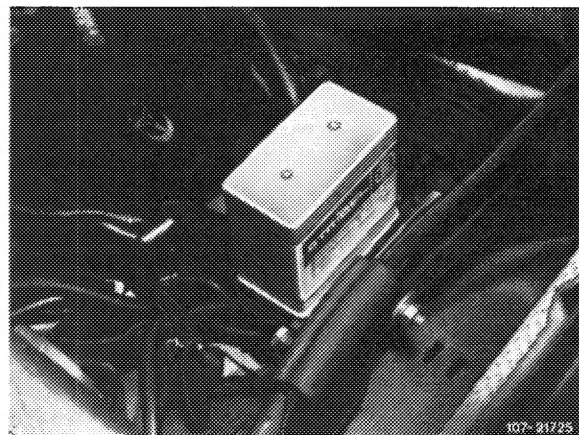


Model 123

Lefthand steering

At the left on wheel house.

Model 123



Righthand steering

At the left inside vehicle behind side panelling. Remove cover for repairs.

Model 123

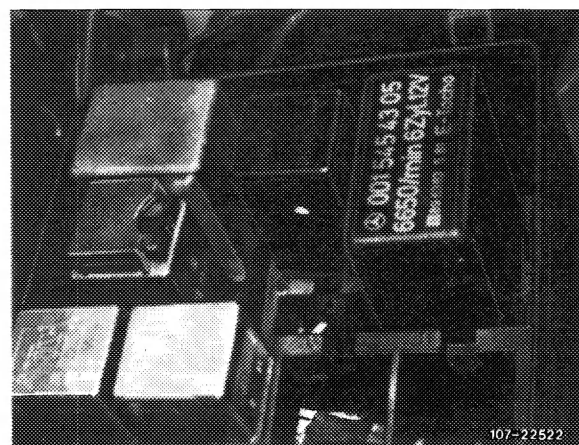


Model 126

Lefthand and righthand steering

At the left in fuse box.

Model 126

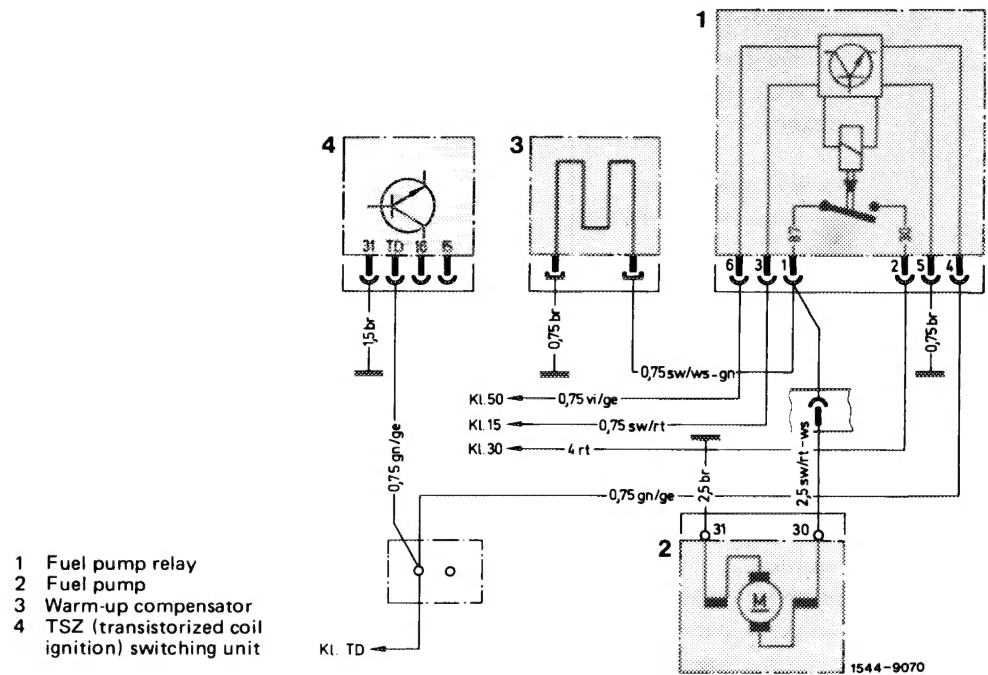


A. Prior to September 1981

Testing

Test condition

Battery charged to min. 60 %.



Testing activation of fuel pump relay

Remove fuel pump relay.
Connect negative cable (black) of voltmeter to vehicle ground). Measure voltage with positive cable (red) of voltmeter on jack 2 (terminal 30) of coupler.

approx. 12 Volts

0 Volt

Test line (terminal 30, red) to cable connector engine harness for interruption.

Remove interruption.

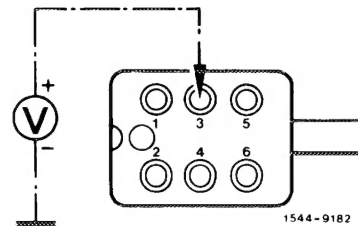
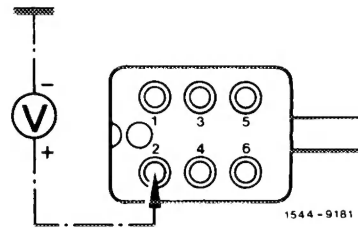
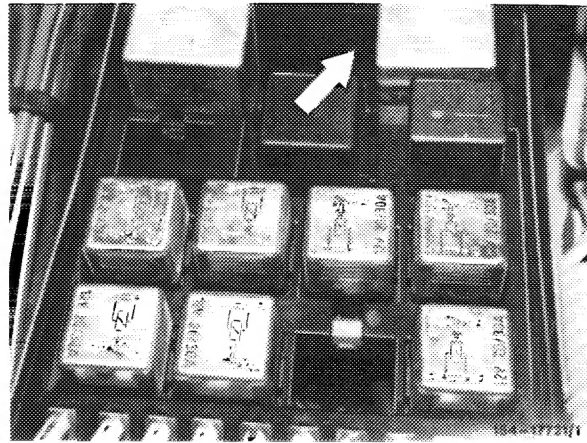
Switch-on ignition.
Measure voltage by means of positive cable of voltmeter on jack 3 (terminal 15) of coupler.

approx. 12 Volts

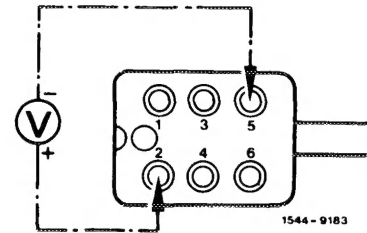
0 Volt

Test line (terminal 15, black/red) to ignition starting switch for interruption.

Remove interruption.



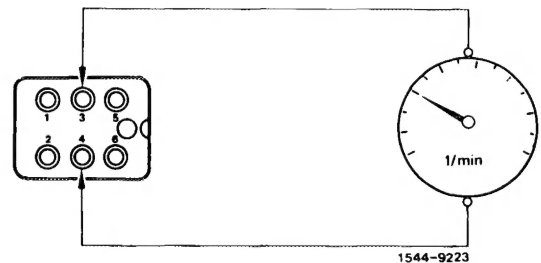
Connect positive cable (red) of voltmeter to jack 2 (terminal 30) and negative cable (black) of voltmeter to jack 5 (terminal 31) of coupler and measure voltage.	
approx. 12 Volts	0 Volt



Test line (terminal 31, brown) to grounding point for interruption.

Remove interruption.

Connect revolution counter to jack 3 (terminal 15) and jack 4 (terminal TD) of coupler.	
Operate starter.	
approx. 200/min	0/min



Test line (terminal TD, green/yellow) to TSZ (transistorized coil ignition) switching unit for interruption.

Replace switching unit, if line is in order.

Testing operation of fuel pump relay

Connect negative cable (black) of voltmeter to vehicle ground. Plug fuel pump relay on coupler in such a manner that the voltage can be measured at connection 1 (terminal 87) of fuel pump relay by means of positive cable (red) of voltmeter. For this purpose, operate starter.

approx. 12 Volts

0 Volt

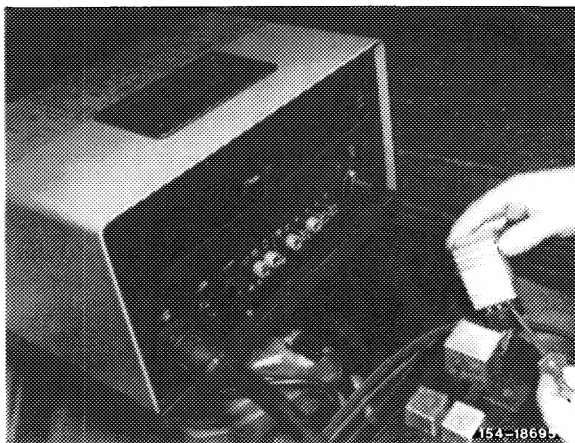
Replace fuel pump relay.

Run engine at idle.

Engine running.

Engine not running

Replace fuel pump relay.



The respective breakaway speed is punched into fuel pump relay.

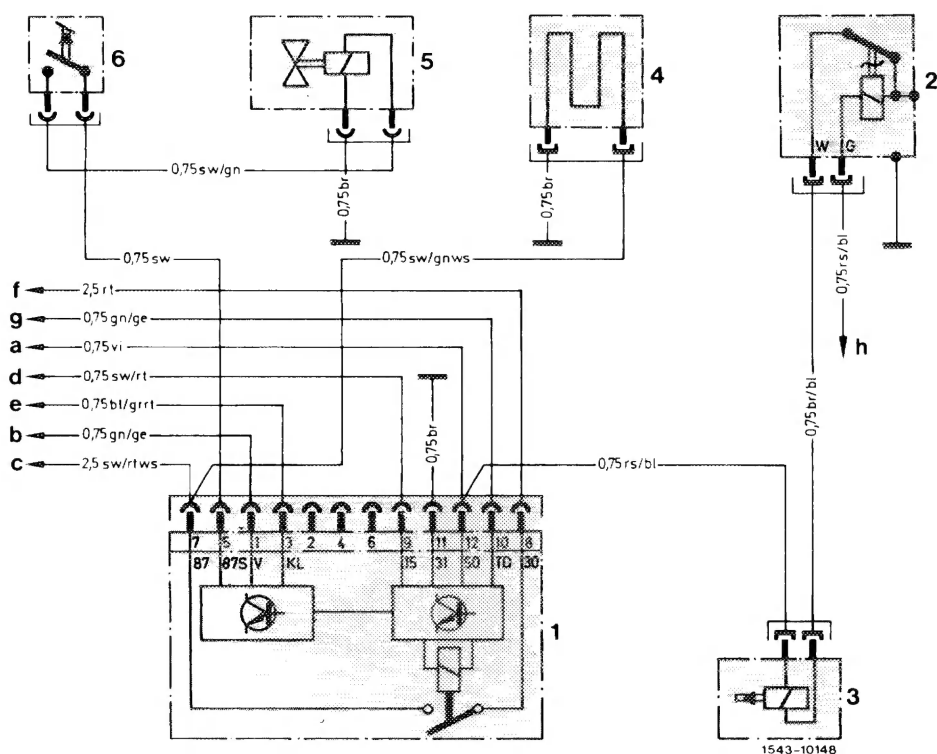
B. Starting September 1981



- 1 Fuel pump relay
- 2 Thermo time switch
- 3 Cold starting valve
- 4 Warm-up compensator
- 5 Switchover valve
- 6 Microswitch

- a To output starter lockout and backup lamp switch
- b Transmitter mechanical tachometer
- c Fuel pump
- d Fuse 12 terminal 15 access
- e Refrigerant compressor
- f Cable connector engine terminal 30
- g Cable connector terminal TD
- h Cable connector engine terminal 50

ws = white



Wiring diagram model 107, 126

- | | |
|-----------------------|--------------------------------------|
| 1 Fuel pump relay | a Cable connector engine terminal 50 |
| 2 Thermo time switch | b Transmitter electronic tachometer |
| 3 Cold starting valve | c Fuel pump |
| 4 Warm-up regulator | d Fuse 14 terminal 15 access |
| 5 Switchover valve | e Refrigerant compressor |
| 6 Microswitch | f Cable connector terminal 30 |
| | g Cable connector terminal TD |
| | h Cable connector terminal 50 |

Color code
 bl = blue
 br = brown
 ge = yellow
 gn = green
 gr = gray
 rs = pink
 rt = red
 sw = black
 vi = purple
 ws = white

Testing activation of fuel pump relay

Remove fuel pump.
Connect negative cable (black) of voltmeter to vehicle ground. Measure voltage by means of positive cable (red) of voltmeter on jack 8 (terminal 30) of coupler.

approx. 12 Volts

0 Volt

Test line (terminal 30, red) to cable connector engine harness for interruption.

Remove interruption.

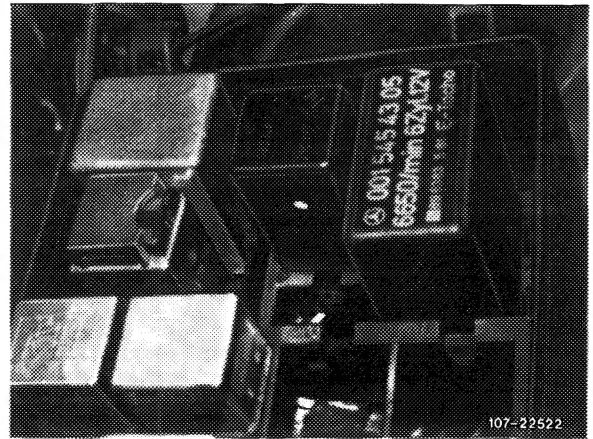
Switch-on ignition.
Measure voltage by means of positive cable (red) of voltmeter on jack 9 (terminal 15) of coupler.

approx. 12 Volts

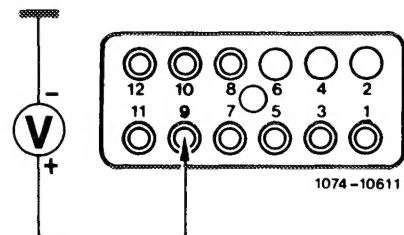
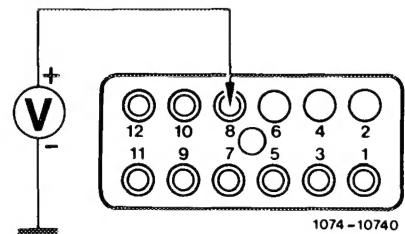
0 Volt

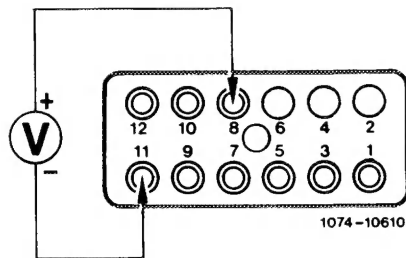
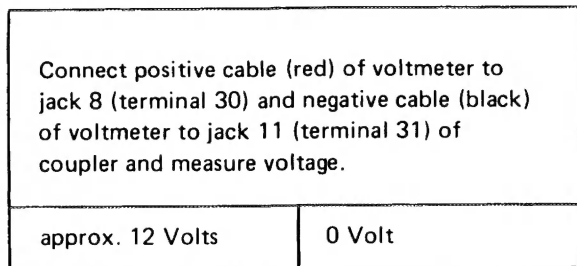
Test line (terminal 15, black/red) to fuse box for interruption.

Remove interruption.



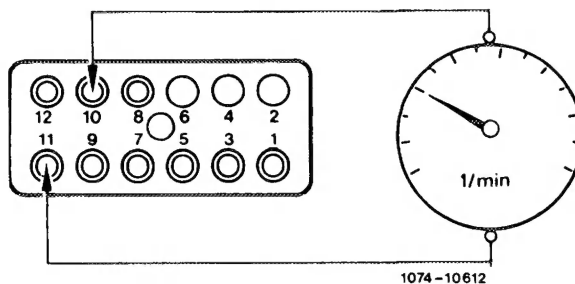
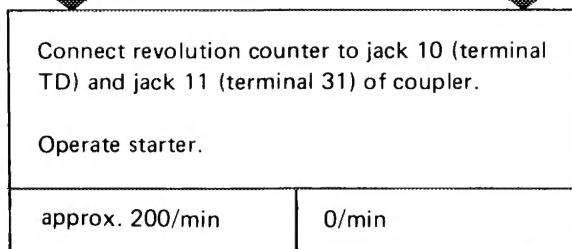
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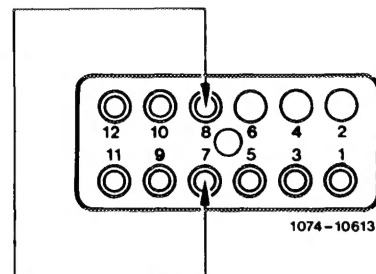
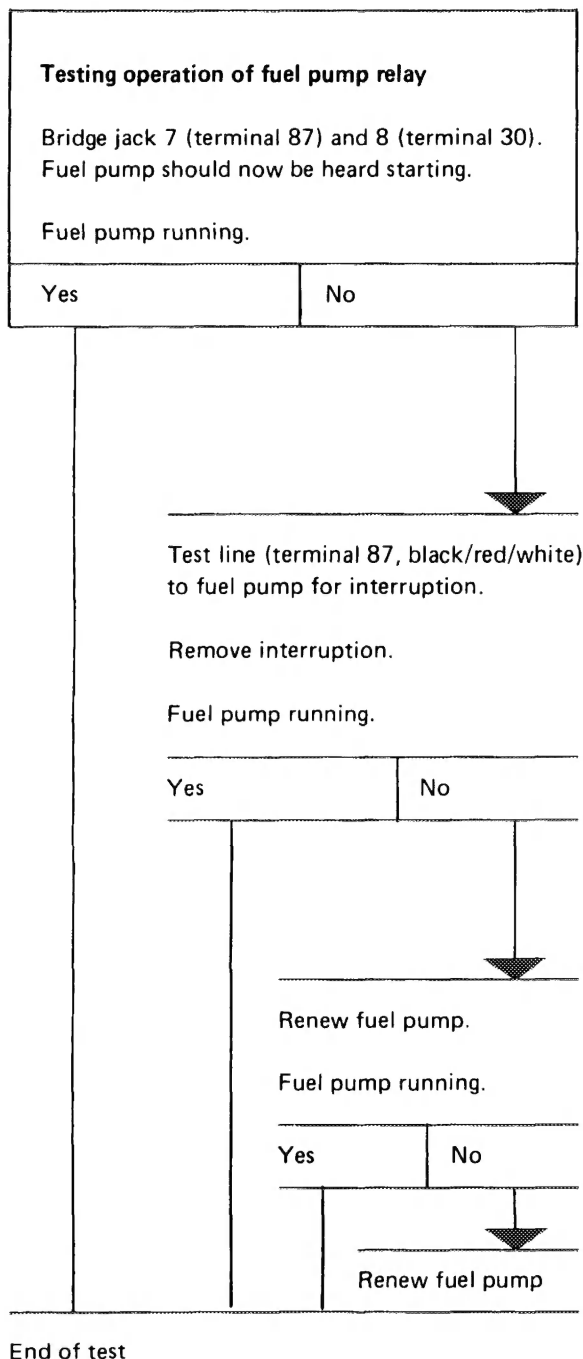
Test line (terminal 31, brown) to ground connection point for interruption.

Remove interruption.



Test line (terminal TD, green/yellow) to TSZ (transistorized coil ignition) switching unit for interruption.

Replace switching unit if line is in order.



If engine is not regulated (breakaway) when engine max. speed is attained, replace fuel pump relay.

The respective breakaway speed is punched into fuel pump relay.